

In the *American Journal* there are recorded six cases of death produced by rupture of the spleen in consequence of violence. One case in vol. 6, for 1830, is interesting with reference to medical jurisprudence. A man in a quarrel with his wife, struck her over the spleen and she died. On post mortem examination, her spleen was found to have been fractured by the blow, and softened by intermittent fever. In consequence of this last circumstance he was acquitted of guilt in producing his wife's death.

ART. XVIII.—*Operation for Artificial Pupil.* By ISAAC HAYS, M. D.,
Surgeon to Wills Hospital. (With three wood-cuts.)

JOHN KANE, aged 24, was admitted into Wills Hospital in August, 1840, with central opacity of both cornea; in the right eye there was also an adhesion of the iris at the upper edge of its pupillary margin, to the cornea just above its centre; and the pupil of the left eye was closed by lymph. This condition had resulted from an injury sustained whilst blasting rocks, five months previously. He was subjected to the usual treatment for the removal of the opacity of the cornea, and of the lymph from pupil, and the former was so much lessened by the following spring that it was believed useful vision might be obtained with the left eye, if the opaque mass which closed the pupil were removed. Extract of belladonna around the eye, and mercury given to salivation having failed to accomplish this, Dr. Fox with a needle introduced through the sclerotica broke up the lymph and lens, and after twice repeating the same operation, the pupil was cleared and the patient discharged with his sight much improved. In the fall of 1841, he applied to be again admitted into the hospital, stating, that though his sight was much improved, it was not good enough to enable him to work at his ordinary occupation, and begged that something further might be done.

The pupil of his left eye was perfectly clear, but the cloudiness of the cornea, considerably impaired his sight.

This nebulous condition seemed permanent, for it had continued during several months without any improvement, under various applications. The sight with this eye was too good to justify any operation upon it, as this would involve the risk of destroying what had been gained, which the chance for further improvement did not justify.

The right eye, however, was in a condition which seemed to authorize an attempt to improve its power of vision. Sight with it was so imperfect as to be of no use to him, at least whilst he saw so much better with the other eye. The lens was transparent and the pupil clear; there was dense

opacity of the centre of the cornea, but the lower portion was perfectly clear, excepting at a few very minute points where it had been burned by

Fig. 1.



grains of gunpowder. The upper edge of the pupil adhered, as already stated, to the cornea. (See Fig. 1.)

The pupil could be slightly dilated with belladonna so as somewhat to improve the sight, but not sufficiently to enable the patient to see even as well with it as he could with the other eye. In consultation with my colleagues, I therefore

determined to attempt an operation for his relief.

The one which first suggested itself, as best suited to this case, was that of Gibson; but the risk of wounding the anterior capsule of the lens with the hook, and also the danger of effusion of lymph from the margin of the incision of the iris, rendering the capsule opaque, and closing perhaps the new pupil, presented objections to it. Reflecting on the almost constant occurrence of prolapse of the iris in wounds of the cornea with consequent synechia anterior and drawing aside of the pupil, and that if the pupil were thus drawn towards the lower margin of the cornea by a simple wound of this coat, every thing that could be desired would be attained, and at little risk; I decided to operate in conformity with these views.

This I accordingly did on the 28th October, 1841, in the presence of my colleagues, Drs. Littell, Fox and Parrish, the house surgeon Mr. S. L. Hollingsworth, and Drs. Pepper, Neill, &c. The patient being laid on his back on a table, the lower lid of his right eye was depressed by Dr. Fox, whilst I raised the upper lid with the two fore-fingers of my left hand, steadying the ball with the third finger. I then with a properly constructed cataract knife incised the cornea near its junction with the sclerotica, commencing a little below the middle and extending so as to divide nearly one fourth of the circumference of the cornea. The knife was carried steadily and rather quickly forward, to prevent the escape of aqueous humour before the completion of the incision, as its sudden discharge would favour the prolapse of the iris. The moment the incision was completed the knife was withdrawn; at the same instant the aqueous humour was evacuated at a gush, and the lids were allowed to close. The gush was even greater than I had hoped for, so much so, that at first I supposed some pressure must have been made on the eye, which was not, however, the case. After the lapse of a minute or two, the lids were separated and the iris found prolapsed so as to draw the lower edge of the pupil quite to the incision. I felt satisfied that the iris would adhere to the cornea at the wound, forming at this point

synechia anterior, and determined contrary to the opinion of all present to trust to this taking place. The patient was placed in a dark room, and put upon a restricted diet. The result justified my confidence; adhesion formed, no inflammation occurred, the patient was soon able to bear the light; his vision improved, and a few days since, (Sept. 1,) Kane called to see me and assured me that his vision with that eye was almost as good as ever. The accompanying figure, (fig. 2,) represents the form of the artificial pupil.

I had intended, should the iris not have been prolapsed spontaneously, to draw it out with a small blunt hook which I had prepared by bending an Anel's probe; (see fig. 3,) and such an instrument may be occasionally required. But I believe that in the large majority of cases if the knife used be a good one, and the incision properly made, the iris will either be forced out by the gush of aqueous humour, or prolapse soon afterwards from the pressure of the humours. I am not sure that a punctured wound with a straight needle, especially if the flat part were rotated in the wound so as to prevent immediate union, will not answer equally well, and propose trying it on a fitting occasion.

This operation is suitable to a number of cases, and in such it possesses advantages over those usually resorted to.

Fig. 2.



**ART. XIX.—*Improvement on the Tourniquet*, by SILON A. HENKEL,
M. D., of New Market, Va. (With a wood-cut.)**

CONSTRUCTED as the tourniquet commonly is, the band is very apt to be cut by the tongue of the buckle. Professor Gibson mentions in his lectures, that this instrument is in this respect defective. To remedy this, he cautions his pupils not to have the tongue of the buckle too sharp. But, be the tongue as it may, the band is, from the immense strain, still very apt to be slit. To avoid this, I have devised the following plan. I sew to one end of the band, four feet long, a slide, marked S. in the accompanying drawing. The band is then passed through the rollers of the tourniquet in the usual way. The end to which the slide is not attached, is then passed through